

ABSTRACT

The inventive average or small size mechanical steel part is produced by hot forging or cold stamping i.e. by plastic processing of a long ferrous semi-product which is obtainable by continuous casting and hot rolling in the austenitic phase and, afterwards is shaped by plastic deformation and heat treated in order to obtain a metallographic structure substantially containing an acicular ferrite at least in mechanical toughness and fatigue stress areas. The composition of said steel, apart from iron and inevitable residual impurities resulting from steel production, corresponds at least to the following analysis: 0.2-0.5 % C, 0.5-2.0 % Mn, 0.05-0.5 % V, 0.6 1.5 % Si, 0.05 1.0 % Cr, 0.01-0.5 % Mo, 0.02-0.10 S, preferably from 0.01 to 0.02 % Ti and/or up to 0.20 % Al, and from 5 to 30 ppm of Ca.